

The ability to individualize and tailor program content is advantageous for an advertiser, as it allows the advertiser to allocate an advertising budget in a prudent and highly effective manner. Products may be touted to those consumers whose interests, personal characteristics (age, gender, marital status, and the like), location, and other comparable demographic characteristics make them likely to buy that product. On the other hand, the system allows the advertiser not to waste resources in advertising products that a given user would likely not purchase or find appealing.

The replacement of advertisements is completely transparent to the user; such replacements are interposed solely at those points within the flow of program content which are preselected by the program director. Each user, whether listening via the Internet or by normal radio transmission, will hear and see advertising at the same point in the program, even though the advertising content to which different users are made privy is differentiated in accordance with user profile, thereby causing different users to hear different advertising content.

Claims 1 – 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over and U.S. Patent No. 5,917,830 to Chen et al. in view of U.S. Patent No. 6,094,677 to Capek et al.

Chen et al. discloses a method and apparatus for splicing a secondary packetized data stream, such as a commercial, with a primary packetized data stream, such as a network television program.

With respect to claims 1 and 7, the Examiner has indicated that Chen et al. discloses a system and method for substituting advertisements during a broadcast, comprising: (a) generating, digitizing, and storing a plurality of replacement commercials for insertion into the broadcast; (b) marking the broadcast with start and stop times of the commercial; (c) receiving the broadcast; (d) detecting and reading the insertion marker on the broadcast; (e) selecting and substituting (inserting) a replacement commercial into the broadcast at a point corresponding to the insertion marker; and (f) repeating the detection and insertion of replacement commercials throughout the broadcast.

The Examiner has indicated that while Chen et al. uses a network television broadcast as an exemplary use of the invention, it is also disclosed that the invention can be applied for splicing a secondary packetized data stream with a primary packetized data stream. However, this disclosure falls far short of applicants' claimed method, because Chen et al. does not disclose or suggest any packetized data stream delivered to an Internet hosting service, as required by each of claims 1-12. Chen et al. merely contemplates such packetized data streams as a mechanism for delivery of program material to a cable system headend. It is inherent that cable transmission is uni-directional to the end subscribers within a given system, all of whom thus receive identical signals. The crucial step of connecting to an Internet hosting system for delivering program material to a user via the Internet is not disclosed or recognized by Chen et al. Connection via the Internet overcomes the significant uni-directional transmission limitation of any Chen et al. cable system, since the Internet affords the missing bi-directionality of communication. It is respectfully submitted that the Chen et al. system cannot be properly reconstructed in the absence of applicants' own invention to achieve the objectives accomplished by applicants' claims. Such hindsight reconstruction, which requires use of the present application as a template, was held to be improper in Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ 2d 1551, 1554 (Fed. Cir. 1996).

Applicants' claims 1 and 10 further call for a comparison between the lengths of the original broadcast commercials and the commercials being considered as replacements. The Examiner has correctly recognized that Chen et al. does not explicitly disclose a comparison made to determine whether the duration of the replacement commercial corresponds to the duration of the main commercial being replaced. However, the Examiner has pointed to Chen et al.'s teaching at col. 1, line 65 to col. 2, line 3 of avoiding discontinuity which results in a non-compliant data stream, and has indicated that such teaching implies the comparison. Applicants respectfully submit that the purported comparison has not been established as inherent in the cited passage. Surely the Chen et al. teaching of discontinuity avoidance is not equivalent to applicants' required comparison, since

the packetized data stream of Chen et al. can be altered so as to retain compliance without the commercials being of equivalent length, and Chen et al. clearly does not teach a requirement to the contrary.

The Examiner has further cited Capek et al. as supporting a comparison of the duration of a break and the duration of a proposed replacement commercial.

Capek et al. discloses methods, apparatuses and computer program products that provide information to a user during delays in retrieving program material with an interactive system connected to a network. The information provided to the user is referred to as an insertion, since it is inserted into the normal stream of user requested data. The Capek et al. method makes use of delays attendant to the vagaries of a network such as the Internet to provide the user with an insertion containing information which may be customized to either the user or the program material requested, or both. It is said that an expected length of delay for the receipt of the user requested data can be made and used as the basis for deciding whether or not to make an insertion. Several means are suggested for determining whether the delay is sufficiently long for an insertion, including a perceived actual delay, historical knowledge of delays based on factors such as the time of day, location of the requested program material, and network management information regarding the congestion or traffic within the network. If made, the insertion may continue either until the requested material is received or for a predefined period of time. Capek et al. further discloses that while the insertion is being presented, the retrieved program material may be cached as it is being received. Significantly, Capek et al. does not contemplate the replacement of actual program content by substitute content, such as the substitution of replacement commercials for already extant broadcast radio commercials. Capek et al. does not suggest that incoming program content be monitored for already extant indicia that mark planned opportunities for inserting advertising material. Instead, Capek et al. merely contemplates addition of material inserted in gaps in the data stream being received. As such, practice of the Capek et al. teaching inevitably extends the length

of a total program's content. Such extension is clearly incompatible with radio broadcasting, which conventionally comprises on-going programming including segments of defined length and scheduling.

Furthermore, Capek et al. does not contemplate the use of programming content as a consideration in determining when or if an insertion is to be made. Rather, the determination is made based on an essentially random, opportunistic basis, i.e., the status of the Internet. Clearly, with the Capek et al. system, neither the originator of the programming content (the program director) nor the user/consumer have control. By way of contrast, applicants' invention as recited in claims 12-23, calls for replacement of already extant commercials. As such, replacements are made solely at those points in the on-going program content which are under the control of the originating radio station.

As recognized by the Examiner, Chen et al. method makes no comparison between the durations of the replacement commercial and the main stream commercial, which comparison is required, e.g. by step (j) of each of applicants' claims 1 and 10. The Examiner has indicated that based on the Capek et al. patent, it would be obvious to one skilled in the art to compare the durations of the main stream commercial and the replacement commercial when selecting the commercial in the Chen et al. invention, in order to decrease the likelihood of "blank time" during reception of the broadcast if the replacement commercial were shorter than the main commercial or "overwriting" of the main stream broadcast content if the replacement commercial was longer. But the term "blank time" is used here by the Examiner to mean a program gap resulting from inopportune substitution of an advertisement whose duration is shorter than the pre-selected, allotted time. Capek et al.'s use of the term is altogether different, meaning instead that time period during which no program material is available as a result of the unpredictability of bandwidth on the Internet. It is respectfully submitted that the terms have thus been improperly confounded.

More specifically, the determinations of time made in Capek et al. are inferential and carry no reasonable expectation of certainty. The determination of whether or not to insert is said to be "based on a variety of factors" (column 9, line 67). The lack of certainty is further revealed by use of such words or phrases in Capek et al. as "expected delay" (column 10, line 12), "estimation" (column 10, line 21), and "approximately the same time" (column 10, line 25) (emphases added). The Examiner has identified the potential for blank time or overwriting if the main stream commercial and its replacement are not of equal duration. On the other hand, the method required by present claim 1 assures selection of a replacement commercial equal in length to the original commercial. In particular, the duration time determined according to step (i) of claim 1 provides a time certain whereby the selection called for by step (k) can be accomplished.

It is respectfully submitted that the combined teachings of the Chen et al. and Capek et al. references do not disclose or suggest the method delineated by present claims 1-12. Rather, any method practiced in light of the combined teachings of the cited references must include the Capek et al. insertion step. That insertion step would trigger insertion of commercials at random times. The disastrous results caused by insertion of commercials at inopportune times throughout the program would offend the user and discourage advertising support.

In addition, in any method practiced in view of the Chen et al. and Capek et al. teachings, the determination of duration for a replacement commercial is based on the status of the Internet. This criteria makes the determination of replacement commercial duration subject to random events outside the control of the Internet radio program broadcast by a radio station. As previously noted, such random airing of commercials would create a negative impression on users that would likely discourage advertising support. In contrast to any method disclosed by the combined teachings of Chen et al. and Capek et al., the method called for by present claims 1-9 (as well as new claims 10-12) effects insertion of replacement commercials solely at those points in the on-going program content which are under the control of the originating radio station.

Further, applicants submit that the combination of Copek et al. with Chen et al. suggests the propriety or desirability of inserting commercials at any point during the transmission of programmatic material based on the random, often chaotic status of the Internet, rather than at times during the course of a program that are intentionally chosen by the originator of an Internet radio program broadcast by a radio station. Creators of broadcast program content generally schedule commercial breaks with great care, based on aesthetic or programmatic considerations. For example, a producer might select a group of songs to be performed sequentially or a single extended musical work and expect the material to be carried without interruption. Similarly, it would be expected that a given scene that is part of a dramatic stage play would not be interrupted. A commercial would not be appropriate at a critical juncture in a sports event. Scheduling of commercials also entails legitimate business concerns. The sale of advertising is a business transaction between an advertiser and either a commercial broadcaster or an Internet provider. In either case, the contractual relationship likely includes scheduling considerations. Highly undesirable intrusions by an inserted commercial would inevitably occur in any system based on the combined teachings of Chen et al. and Copek et al. Advertisers would be highly averse to possibility that their wares might be tainted in the marketplace if touted at an inadvertent or inopportune time, contingent on the vagaries of the Internet not under their control.

The lack of predictability of the number of inserted commercials and their durations is a further deficiency of any system based on the combined teachings of Chen et al. and Copek et al. The insertion aspect of the Copek et al. disclosure suggests that insertions may be made if the status of the Internet causes delays in downloading material requested. A conventional broadcasting schedule includes advertisements, the number and duration of which are pre-determined by the originating radio station. The method and system recited by applicants' claims 1-12 enable the advertiser and the Internet service provider to predict virtually to a certainty the number and duration of replacement advertisements. This level of expectation and predictability facilitates

contractual arrangement for advertising support. Contractual certainty is readily established, since the number and duration of advertising segments, and hence the value of advertising time conveyed can be precisely defined. A method based on the combined teaching of Chen et al. and Capek et al. of lacks such predictability, because the number and duration of commercials to be inserted is not determinable a priori.

The Examiner has noted that Capek et al. has been cited to support the tracking of start and end times of an advertising opportunity said to be inferred by Chen et al. However, it is well established that a proposed combination of references must be read as a whole. Capek et al. clearly discloses insertion of advertising material, but never discloses or suggests replacement of existing program content including commercials. Any method practiced in accordance with the combined teaching of Capek et al. and Chen et al. therefore contemplates insertion. As the Federal Circuit has ruled, “[P]rior art references before the tribunal must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention. . . . Moreover, appellants cannot pick and choose among individual parts of assorted prior art references ‘as a mosaic to recreate a facsimile of the claimed invention.’” *Akzo N.V. v. United States Int'l Trade Comm'n*, 1 USPQ 2d 1241, 1246 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). Applicants respectfully submit that the Examiner is engaging in hindsight reconstruction to exclude the insertion aspect of Capek et al., since there is no teaching, even combining *arguendo* the Capek et al. and Chen et al. references, to point away from insertion, including insertion at random points within a given program, absent applicants' own teaching.

Accordingly, it is respectfully submitted that the method and system called for by present claims 1 and 7 is not rendered obvious by the combination of Chen et al. and Capek et al.

With respect to claim 2, the Examiner has indicated that Chen et al. discloses the marking of start and end times of the insertion point by the broadcast station. As discussed hereinabove in connection with the rejection of claims 1 and 7, the combination of Chen et al. and Capek et al.

suggests random, not controlled insertion of replacement commercials. Applicants thus respectfully submit that any disclosure by Chen et al. concerning marking of start and stop times by a broadcast station does not cure the lack of suggestion in the reference concerning the combination of features required by claim 2, which depends from claim 1 and requires each of the claim 1 limitations.

With respect to claim 3, the Examiner has pointed to disclosures in both Chen et al. and Capek et al. that an audio stream can be digitized to allow for presenting a series of packets in the proper order as one complete commercial. As discussed hereinabove in connection with claims 1, 2, and 7, applicants submit that the combination of Chen et al. and Capek et al. lacks disclosure of the combination of features required by independent claim 1, from which claim 3 depends. The particular citations regarding digitization that the Examiner has identified do not address these deficiencies. It is therefore submitted that present claim 3 patentably defines over the art applied.

With respect to claims 4-6, 8, and 9, the Examiner has pointed to Capek et al.'s disclosure of customizing the information to be inserted into the program material.

As recognized by the Examiner, Chen et al. does not explicitly disclose using customer demographics in the selection of a replacement commercial. Applicants submit that the Chen et al. method inherently cannot use individualized customer demographics in the selection, because Chen et al. discloses no means by which such demographic information can be conveyed, and it discloses no means by way of which such information, even if available, could be used in the process of making the selection called for either by step (k) of applicants' claim 1, as further defined by each of dependent claims 4-6, or by step (d) of claim 7, as further defined by each of dependent claims 8 and 9. Even less does the Chen et al. disclosure contemplate any mechanism by which the replacement can be customized for each individual recipient of the modified content. By way of contrast, the bi-directional and individualized connectivity of the Internet provides means that enable this customization to be accomplished in the form recited by claims 4-6, 8, and 9. That is to say, the present, Internet-based system and method recited by claims 4-6, 8, and 9 affords the

delivery of program content, including commercials that may be specifically targeted for each and every user of the system. Such targeted delivery capability, as well as the desirability thereof, is completely absent from the Chen et al. teaching. In particular, the Chen et al. teaching is described as being particularly suitable for use at a cable system headend. By its very nature, a cable system provides identical program content to each of its subscribers. While the plural subscribers generally are located in a particular geographical area and so may share certain demographic characteristics, others, such as gender, are highly unlikely to be identical even within a very small area. Although the Examiner has pointed to PC 174, e.g. in Fig. 1, this device is connected via a cable system, not comprising any Internet or comparable communications protocol appointed for bi-directional communication. No other disclosure in Chen et al. is cited as disclosing bi-directional use of PC 174 or any other computer in the manner required by applicants' claims. Whereas the Chen et al. disclosure does not address this limitation, the bi-directional and individual connectivity of the Internet allow a system constructed according to claims 1-12 to provide targeted commercial segments having completely individualized content.

As discussed hereinabove in connection with the rejection of claims 1 and 7, applicants respectfully submit that when combining Chen et al. and Capek et al. the totality of the resultant disclosure must be considered. While the Capek et al. patent suggests insertions that may be customized to a user, it also suggests additional features -- that the insertions are triggered by random events -- which teach away from the invention, defined by applicants' claims. It is accordingly submitted that modifying Chen et al. in light of Capek et al. does not fairly disclose or suggest the invention recited by present claims 4-6, 8, and 9.

With respect to claim 10, the Examiner has indicated that Chen and Capek disclose a method for substituting advertisements which performs steps (a) -- (m) of present claim 1 and further performs the steps in which consumer demographic data and advertisement type information type are stored and used to select the replacement advertisements as in present claims 4 and 5. As

discussed in further detail hereinabove in connection with the rejection of claims 1, 4, and 5, the Chen et al. reference does not disclose or suggest any use of bidirectional, individualized communication, whether Internet-based or otherwise, or a mechanism for delivery of individually tailored program content, as are inherently needed for advertising replacement based on a particular customer's demographic data. Capek et al. discloses only capricious insertion of commercials and fails to contemplate commercial replacement at appointed times. Accordingly, it is submitted that even if properly combined, the Chen and Capek references do not suggest the subject matter of claim 10.

Claims 11 depends from claim 10 and further calls for marking of commercials by the radio station using a radio station computer system. Claim 12 further restricts claim 11, requiring the digitization of the audio stream of the radio station into packets bearing sequential serial numbers, and the marking of broadcast commercials by start time and duration identifies the audio packet serial numbers constituting the audio commercial to be replaced. Insofar as claim 10 is not obvious over the combination of Chen et al. and Capek et al., claims 11 and 12 also patentably define over the cited references.

When compared to any method practiced in light of the combined teachings of the cited references, the method called for by present claims 1-12 effects insertion of targeted advertising in a more controlled, predictable and tasteful manner, thereby facilitating consummation of contractual arrangements. In addition, the method of applicants' claims provides for more satisfactory listening and viewing experiences, thereby presenting a program format far more likely to attract advertising revenue. These significant advantages are submitted to provide adequate basis for predicated patentability of claims 1-12 over the cited references.

Accordingly, reconsideration of the rejection of claims 1 – 12 under 35 U.S.C. §103(a) as being unpatentable over the combination of Chen et al. and Capek et al. is respectfully requested.

In view of the remarks set forth above, it is submitted that the present application is in allowable condition. Entry of this proposed response, reconsideration of the rejection of claims 1 - 12 and their allowance are, therefore, earnestly solicited.

Respectfully submitted,  
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